

TT-10 Turntable

User Manual

INDEX

CONTENT:	PAGE:
SAFETY INSTRUCTIONS:	3
INITIAL SETUP:	5
LEVELING THE TURNTABLE	6
TONEARM SETUP (ASSEMBLY REQUIRED)	6
TONEARM SETUP (FACTORY ASSEMBLED)	7
INSTALLING THE CARTRIDGE	8
ADJUSTING THE VTA (VERTICAL TRACKING ANGLE)	9
CARTRIDGE ALIGNMENT	10
CARTRIDGE DOWNFORCE (WEIGHT)	11
CARTRIDGE AZIMUTH	12
DRIVE BELT AND ANTISKATE PLACEMENT	13
TURNTABLE CONNECTION	14
STARTUP AND SHUTDOWN PROCEDURE	15
TROUBLESHOOTING	16
SPECIAL ADJUSTMENTS: TONEARM MOUNT	17

IMPORTANT SAFETY INSTRUCTIONS:

CAUTION: To reduce the risk of electric shock, do not remove the cover. There are no user-serviceable parts inside; it is recommended that only qualified personnel service this component.



OWNER'S MANUAL: Before powering up the equipment, read all safety and operating instructions and follow them as instructed. Retain the safety and operating instructions for future reference.

ATTACHMENTS: Use only those attachments recommended by the unit manufacturer, as others may cause hazards.

ACCESSORIES: Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing injury to a person or damage to the unit. Mount the unit according to the manufacturer's instructions with the suggested mounting accessory.

WATER AND MOISTURE: Do not use the unit near water (for example, near a swimming pool, bathtub, washbowl, kitchen sink, or laundry tub) or in a damp environment (like a basement or outside in the rain).

OBJECT AND LIQUID ENTRY: Do not push objects of any kind into the unit through openings as they could touch dangerous voltage points and short-out parts, possibly resulting in a fire or electric shock. Avoid spilling liquid of any kind on the unit. If water or any metal object (such as a paper clip, coin, or staple) accidentally falls inside the unit, disconnect it from the AC power source immediately and contact Margules Audio for further instructions.

HEAT: Position the unit away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.

GROUNDING OR POLARIZATION: As a safety feature, the unit may be equipped with a polarized alternating current line plug, in which one blade is wider than the other. This plug will fit into the power outlet only one way. If you cannot insert the plug fully into the outlet, try reversing the plug. If the plug still does not fit, contact a licensed electrician to update your obsolete outlet. Do not break the safety purpose of the polarized plug.

POWER SOURCES: Operate the unit only from the power source indicated on the marking label. If you are unsure of the type of power supplied to your home, consult your unit dealer or local power company.

IMPORTANT SAFETY INSTRUCTIONS:

POWER CORD PROTECTION: Arrange power supply cords so that they do not suffer from foot traffic or pinching by items placed on or against them. Please pay close attention to power cords where plug enter the AC outlet and where they exit from the unit.

OVERLOADING: Do not overload wall outlets, extension cords, or integral convenience receptacles as this increases the risk of fire or electric shock.

REPLACEMENT PARTS: When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or those having the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK: Upon completion of any service or repairs to the unit, ask the service technician to perform safety checks to ensure the unit is in proper operating condition.

IMPORTANT SAFETY NOTE:

Power Cord: The removable power cord provided with your player has been specifically designed for use with this product, but other AC cords may be used instead. Consult your dealer for advice on AC power cords and high-quality wire in your system.

Wiring: Cables running inside walls should have the appropriate markings to indicate compliance and listing by the UL, CSA, or other standards required by the UL, CSA, NEC, or your local building code. Questions about cables inside of walls should be referred to a qualified custom installer, a licensed electrician, or a low-voltage contractor.

RECORDING COPYRIGHT: Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

FCC INFORMATION FOR USER:

CAUTION: Any changes or modifications not expressly approved by Margules Audio could void the user's authority to operate the equipment.



INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

In the following manual, we will cover all the basics needed to set up your new T3 turntable.

1. INSTALLATION REQUIREMENTS:

It is imperative to place the turntable on a firm, non-vibrating, horizontally leveled, and solid support.

2. ASSEMBLING THE BEARING AND PLATTER:

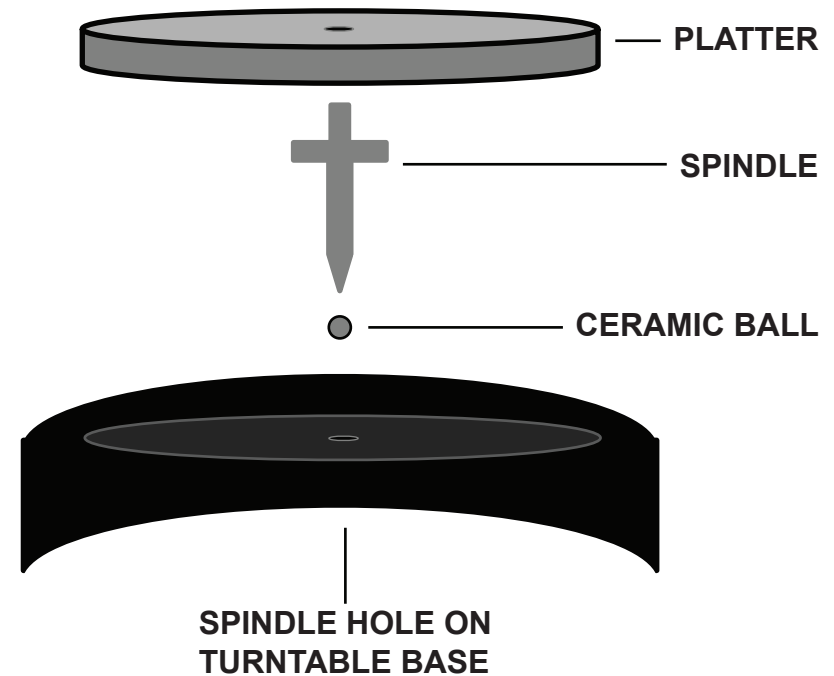
2.1: Carefully insert the ball bearing into the spindle hole. The ball bearing is made from ceramic. If the platter is dropped too hard when placing it, the ball bearing can break.

2.2: Insert the spindle into the hole carefully, allowing the air to flow outside of the bearing structure. The bearing has been pre-lubricated from the factory, and it should be cleaned and lubricated with thin oil after every 100 hours of use.

2.3: Carefully place the platter on the spindle. DO NOT twist, drop or force the platter into position; this could damage the bearing and will void the warranty.

In the next image, we can see the correct order in which all the pieces should be assembled.

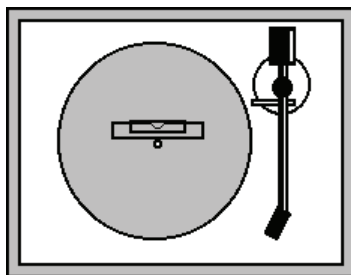
The platter should spin freely after everything is in place.



INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

3. LEVELING THE TURNTABLE:

Before placing the turntable on its final position, make sure that the surface on which the turntable will be mounted is solid, flat and stable.

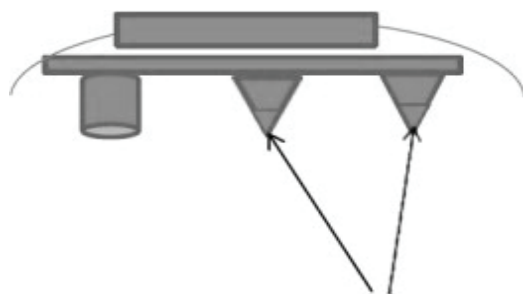


3.1 LEVELING THE TURNTABLE:

After positioning the turntable on its final place, make sure that its leveled with a bubble level, if you need to adjust the height of the feet, the turntable spikes can be adjusted.

To adjust the turntable, screw and unscrew the tip of the cones until the turntable is leveled.

The Motor base is fixed; therefore it cannot be adjusted or modified.



Unscrew the tip of the cones for leveling adjustment

4. TONEARM SETUP AND CALIBRATION (ASSEMBLY REQUIRED):

Please read the following steps carefully!

The tonearm is factory leveled, but the eccentric tonearm counterweight and cartridge needs to be installed.

A correct tonearm and cartridge calibration will ensure the best audio quality and will extend the life of the stylus tip and your records, so please take time and care to set your turntable carefully and correctly.

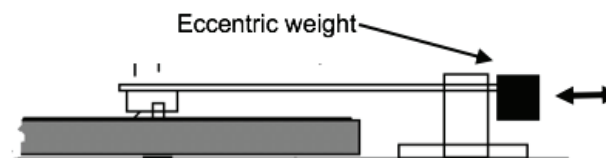
For all the following adjustments, you might need:

Small screwdriver to set the cartridge (Not Provided).
Set of Allen keys 1/16 for all adjustments except for the tonearm mount 9/64 (Not Provided).
Digital Scale (Provided).
Protractor and VTA Scale (Provided).

4.1 ASSEMBLING THE ECCENTRIC WEIGHT:

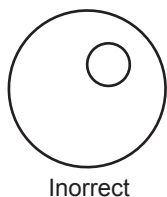
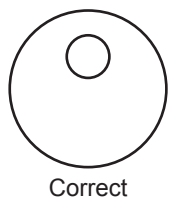
In the back of the tonearm, you will find the eccentric counterweight mount.

DO NOT MOUNT the cartridge until counterweight is installed.



INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

4.1.1 Unpack the eccentric counterweight and gently, holding the arm in such a way that you won't damage the tonearm or the pivot push it into the weight mount, located in the back of the tonearm. It is recommended that you twist the counterweight left and right while pushing in the counterweight, this will help to let it slide in.



Moving the eccentric counterweight left and right will shift the tonearm center of gravity, allowing it to tilt.

4.1.2 Level the eccentric counterweight to allow the tonearm to be as leveled as possible, as we will continue the final adjustments on page 10 of this manual.

INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

4A. TONEARM SETUP AND CALIBRATION (FACTORY ASSEMBLED):

Please read the following steps carefully!

The tonearm is factory calibrated and leveled, but the shipping and handling of the turntable can modify the factory settings.

A correct tonearm and cartridge calibration will ensure the best audio quality and will extend the life of the stylus tip and your records, so please take time and care to set your turntable carefully and correctly.

For all the following adjustments, you might need:

Small screwdriver to set the cartridge (Not Provided).
Set of Allen keys 1/16 for all adjustments except for the tonearm mount 9/64 (Not Provided).
Digital Scale (Provided).
Protractor and VTA Scale (Provided).

4A.1 PRE-SET THE CARTRIDGE WEIGHT:

The final downforce (weight) of the cartridge will be adjusted on page 10 of this manual. This pre-set is for allowing you to measure and align the cartridge correctly.

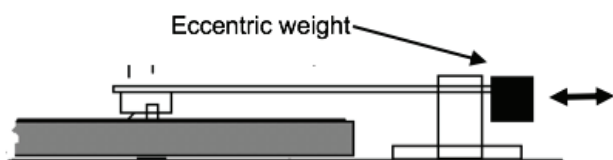
4A.1.1 Unpack the digital scale and insert the batteries (Included). Place the scale on top of the platter, carefully turn it on and wait for 2 seconds for the scale to tare.

4A.1.2 Carefully remove the stylus guard and unlock the tonearm.

4A.1.3 Using the tonearm lifter, very carefully position the stylus on the black dot of the scale and allow it to measure the weight.

4A.1.4 The scale should measure between 1 and 2 grams of downforce (weight), this will allow to adjust the tonearm and cartridge alignment. If the downforce is lower than 1g or higher than 2g please adjust the Eccentric counterweight.

To adjust the downforce (weight) of the tonearm move the eccentric counterweight:



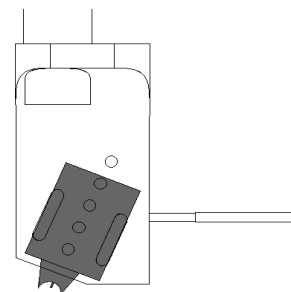
Gently move the counterweight towards the cartridge to add more downforce and further from the cartridge to reduce downforce while the tonearm is located on its guard.

Use the tonearm lifter to raise the tonearm and place it on the scale until a range of 1-2 grams is measured.

5. INSTALLING THE CARTRIDGE:

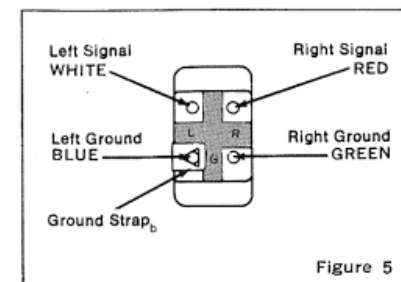
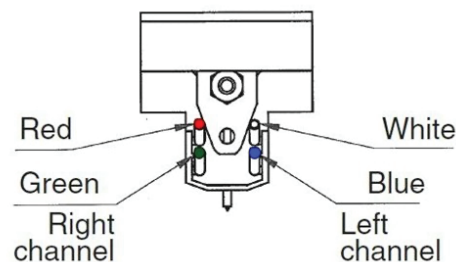
Before installing the cartridge, please follow the cartridge manufacturer's instructions and install the cartridge on the tonearm.

NOTE: The final cartridge position will be adjusted on pages 9-12 of this manual.



5.1 CONNECTING THE CARTRIDGE:

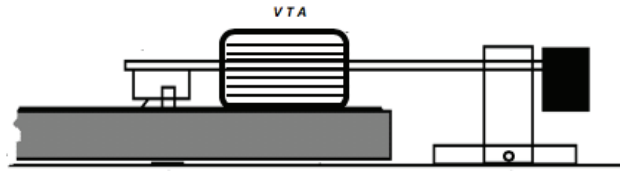
Before connecting the lead wires to the cartridge, please read the user manual of the cartridge, and follow the color code on the back of the cartridge. If the cartridge does not include a color code, use the following diagram (Figure 5):



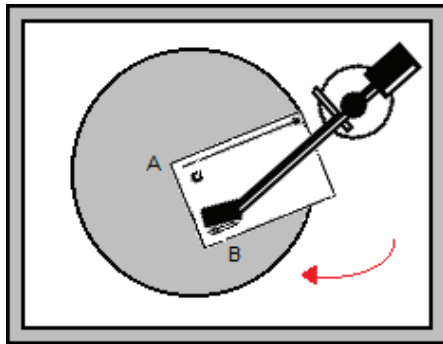
INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

6. VTA (VERTICAL TRACKING ANGLE) ADJUSTMENT:

The T3 tonearm mount is factory pre-adjusted and should be leveled to the platter.



6.1 Pull out the turntable protractor that you received with your TT-10 turntable, and place it with the circular hole in the center of the spindle, and align it, so it's pointing to the center of the tonearm's pivot.



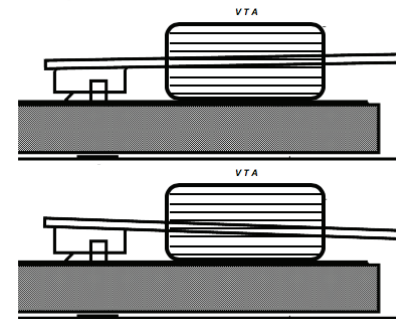
6.2 Place the tonearm on the protractor and align it with the VTA piece of the protractor.

In the Margules arm, the arm's body should be lining against the protractor's VTA wall.

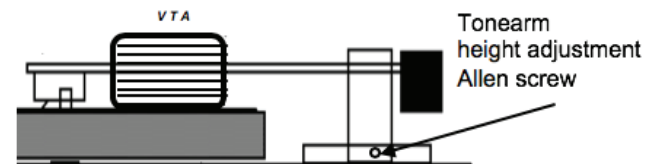
As a confirmation, the centerpiece of the protractor should be pointing the pivot of the arm.

These lines should be parallel to the arm body. This will give you the VTA alignment and the correct position of the stylus and the azimuth.

The following images are examples of the results you get if your VTA is not yet correctly adjusted, which means the turntable still needs some adjustment.



Lift or lower the tonearm with the tonearm height adjustment allen screw until it is parallel with the VTA lines on the protractor.

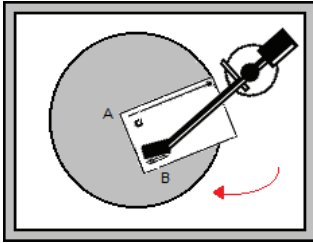


Once that is done, retighten the tonearm height adjustment screw.

INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

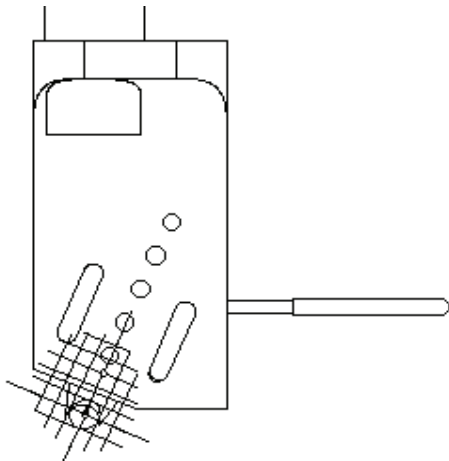
7. CARTRIDGE ALIGNMENT:

Move the tonearm against the internal VTA wall of the protractor. As explained in the VTA adjustment, on page 9.



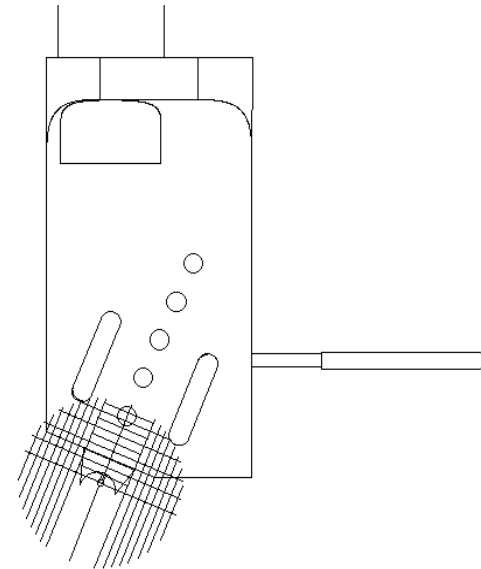
To help during the alignment procedure, do not tighten the screws, have them slightly loose so you can move the cartridge while adjusting.

Adjust the pickup cartridge, so the needle tip rests on the cross point of the protractor circled, Adjust the cartridge so that the cantilever is aligned with the line of the protractor, this will ensure the tangential adjustment.



Once you have achieved that, carefully tighten the screws of the cartridge. Double check a proper tangency adjustment by moving the arm and placing the needlepoint in the second web, the one nearer the center.

Then check the needle tip and cartridge are aligned with the other point on the protractor that is closer to the spindle (you will have to slightly rotate the protractor).



You should have no problem with this if you have the correct VTA.

If required, please read page 9 of this manual.

INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

8. CARTRIDGE DOWNFORCE (WEIGHT):

To ensure the best audio quality and extend the life of your cartridge and records, the downforce must be adjusted.

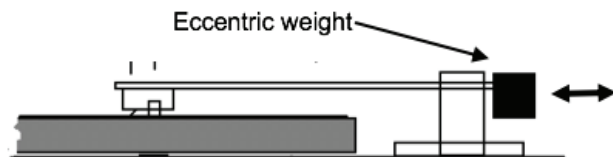
Please refer to the cartridge user manual to read the cartridge recommended downforce.

To adjust the downforce, please use the digital scale included with your new turntable.

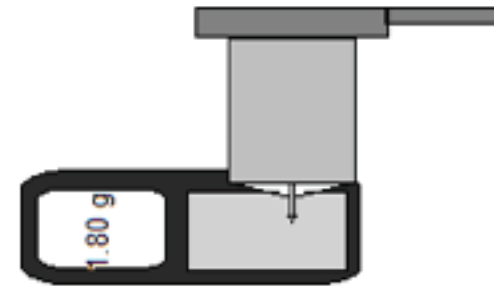
7.1 Place the digital scale turned off on the platter, turn it on gently, and wait 2 seconds, allowing the scale to tare.

7.2 Using the tonearm lifter, move the tonearm until the stylus tip rests on the black dot in the center of the measuring area, and lower the tonearm to allow the scale to measure the downforce.

7.3 Using the tonearm lifter, raise the tonearm, and adjust the downforce by gently pushing or pulling the eccentric counterweight forward and backward.



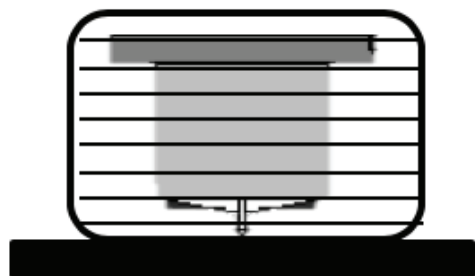
7.4 Pushing the counterweight will reduce downforce, and pulling the counterweight will add more downforce, make small and gentle movements, use the tonearm lifter, place the stylus on the scale and take readings until the downforce recommended by the cartridge manufacturer is reached.



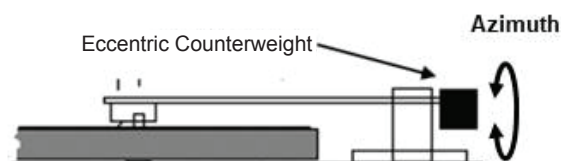
INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

9. CARTRIDGE AZIMUTH ADJUSTMENT:

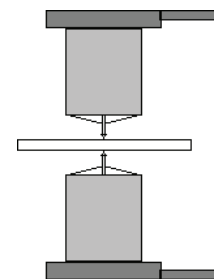
9.1 Using the provided protractor, check the cartridge seen from the front, it has to be parallel to the engraved lines of the protractor azimuth graph:



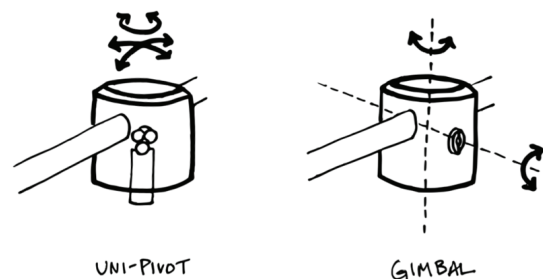
9.2 If the azimuth needs adjustment, rotate the eccentric counterweight in the back of the tonearm until the cartridge seen from the front is parallel to the lines of the azimuth adjustment piece of the protractor, avoid moving the counterweight forward or backward to avoid changes in the downforce.



You can also use a small mirror to quickly check if the needle tip is perpendicular to the record.



The T3 tonearm is unipivot. After the azimuth has been adjusted, tap down on both sides of the head of the axis to make sure that the head axis appears to be “floating” over the pivot without touching the tonearm axle, or in other words, when it can easily move up and down and sideways. Please make sure that the Itonearm lifter is on the raised position.



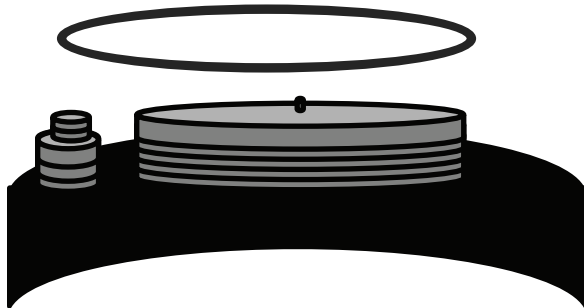
In case that the azimuth is aligned but the tonearm is touching the tonearm axle, further adjustments will be required. Please refer to page 17 of this manual.

After adjusting the azimuth, you must re-check the cartridge downforce.

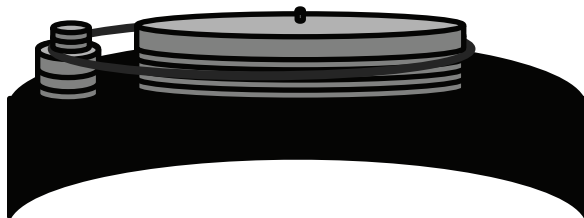
INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

10. DRIVE BELT PLACEMENT:

10.1 Start by gently placing the drive belt on the grooves of the motor axis and then on the grooves of the platter.



Slowly spin the platter until the turntable drive belt is set on both the platter and the motor axis grooves.



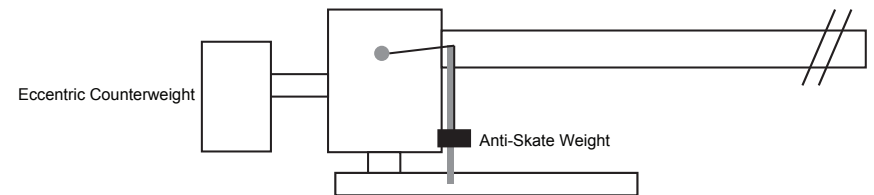
The top grooves on the motor axis are for 33 RPM, and the lower grooves are for 45 RPM.

11. ANTI-SKATE WEIGHT PLACEMENT:



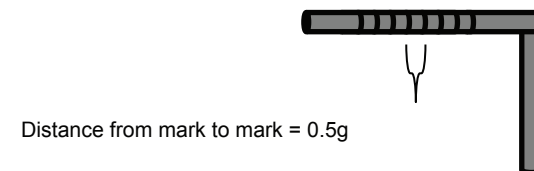
Place the loop of the weight filament in the hook of the anti-skating device on the tonearm base.

Place the filament over the anti-skating weight adjustment arm, and let the weight hang behind it.



Every mark on the anti-skating weight adjustment arm is approximate to 0.5g.

Adjust the weight, so it matches the weight of your pickup cartridge.



INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

12. TURNTABLE CONNECTIONS:

When connecting the turntable, the cables should rest on the platform you placed your turntable on, and not pull the turntable back or sideways.

It is essential to make sure the cables don't mess with the turntable level setup in the beginning when all of the connections are made.

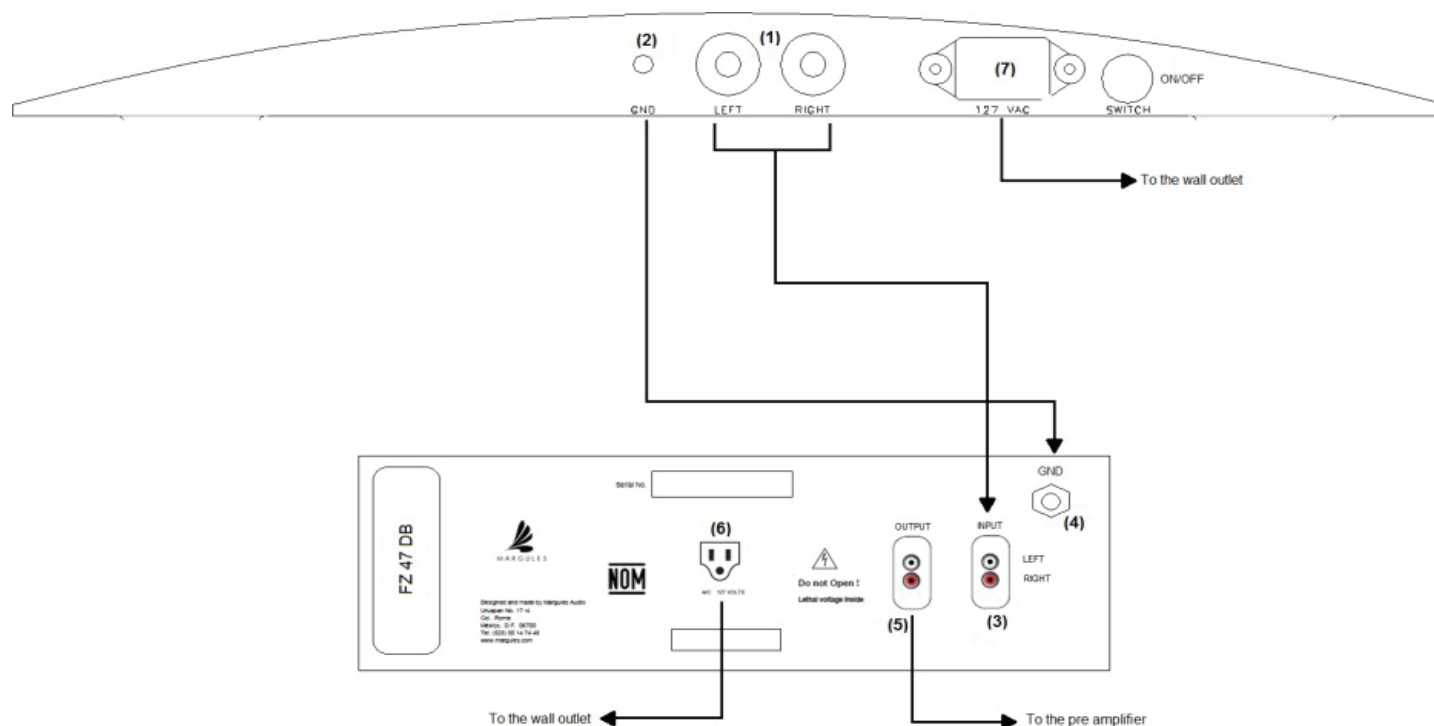
To ensure that the cables are not modifying the turntable level, you can check the motor suspension by pushing down the turntable body next to the motor, and the turntable body should move up and down freely.

First, connect the RCA (1) output and ground (2) from the turntable to the FZ 47 DB phono preamplifier input (3) and ground (4), respectively.

Then connect the output of the phono preamplifier (5) to your preamplifier.

Finally, plug both equipments to the 127 AC (6,7).

Follow this diagram to make the connections:



INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

13. STARTUP PROCEDURE

To start up your turntable, verify that all the connections and adjustments mentioned previously have been done correctly. Once that is done, follow the next steps.

Switch the power button to the ON position.
Place vinyl on the platter.

The motor is a very low torque motor, and produced very low vibrations and noise, therefore to start it, spin the platter clockwise manually a few turns, reaching the desired speed of 33 1/3 rpm or 45 rpm and the motor will start and will continue spinning the platter at the correct speed.

Select the desired RPM by lowering or raising the turntable drive band from the motor axis. The top grooves on the pulley are for 33 RPM, and the lower grooves are for 45 RPM.

Raise tonearm by the lever, and set to the position where the vinyl or desired song begins.

Lower tonearm using the tonearm lifter to the desired position on the record.

Wait for your favorite vinyl or song to start, and enjoy your new T3 turntable.

14. SHUTDOWN PROCEDURE

Raise tonearm with the tonearm lifter.

Place tonearm on the tonearm rest support.

Power OFF the turntable.

Wait for the platter to stop spinning, or stop platter manually.

Remove vinyl from the platter.

INITIAL SETUP, INSTALLATION, AND ASSEMBLY:

15. TROUBLESHOOTING:

No sound?

Check that the input selected in your pre-amplifier or system is the one where you connected your FZ 47 DB phono stage, or your own phono stage.

Check for an appropriate system volume.

Verify pickup cartridge cables, turntable RCA output cables, ground cable, and power cable are properly connected.

Sound image shifted to one side?

Verify that the pickup cartridge is properly aligned with the protractor.

Inspect the needle in the pickup cartridge to see that it is not bent or damaged.

Noisy or distorted audio?

Verify all connections have been properly made, including the ground cable from the turntable to the FZ 47 DB phono stage, or your phono stage. Also make sure that the cartridge type is compatible with the phonostage.

Verify proper volumes are set at all the gain stages in your sound system.

Inspect the needle in the pickup cartridge to make sure that it is not damaged.

Skipping tonearm?

Make sure the tonearm is properly set, and the downforce is adjusted according to the cartridge manufacturer specifications.

Check the VTA, Azimuth, and arm lifter clearance.

Shifted sound image?

Verify the cartridge has been set up correctly so that it is parallel to the vinyl, and the needle is perpendicular to the headshell.

Adjust the Anti-Skate weight. If required, please read page 13.

SPECIAL ADJUSTMENTS: TONEARM MOUNT

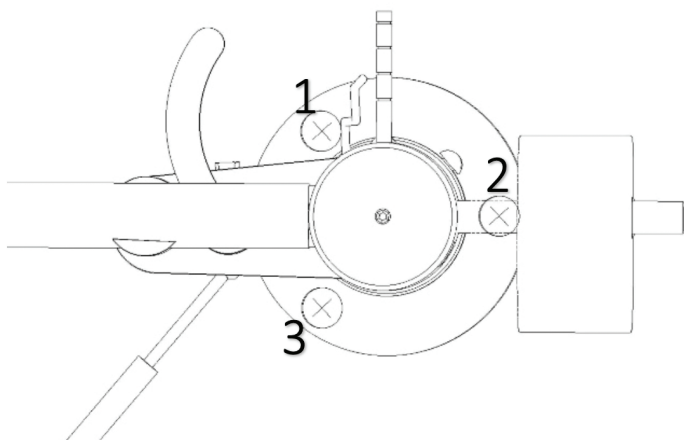
16. TONEARM SUPPORT ADJUSTMENT:

The tonearm support is factory pre-adjusted, and it is already leveled to the platter.

To adjust it, you can dismount the arm and level it precisely with relation to the platter with a bubble level, making sure that the tonearm mount is leveled in all directions. This tonearm mount can be raised or lowered, depending on the configuration of the tonearm.

The support can be adjusted in three-axis by adjusting the screws on the base of the tonearm.

If you tighten the screw in the back of the tonearm base (2), the tonearm will tilt backward, and raise the tonearm so it might not touch the record surface, or the arm lifter won't be able to raise the arm the 2mm required, and the tonearm will not be able to rotate freely because of possible friction with the tonearm lifter.



If you tighten or loosen the screws on the sides (1 and 3), the axis will tilt sideways.

Those adjustments can be used to make sure that the tonearm is floating freely over the pivot.

If it is not correctly aligned, you can have friction into the arm body cover of the pivot by touching with the internal axle, and the arm lifter will not work correctly, and cartridge misalignment can occur.

To ensure that the alignment is correct, you must check that on the outside of the record, and into the record, the arm can rotate freely, and the lifter has to lift the tonearm by 2mm in relation to the record, and also the lifter and the tonearm need to have 1-2mm clearance when the record is being played.